

Abstract of the Disclosure

1           An impact-reinforced piezocomposite transducer array  
2 comprises a load supporting structure having a plurality of  
3 cells, each of said cells comprises a piezocomposite transducer  
4 element. The load supporting structure comprises a honeycomb  
5 structure having a plurality of multi-sided cells or the  
6 structure comprises a plurality of cylindrical cells. The  
7 piezocomposite element includes a plurality of piezoceramic  
8 rods encapsulated in a polymeric matrix to form a 1-3 composite  
9 body. The transducer array may be used as a hydrophone or a  
10 transmitter in a rugged environment such as on the hull of an  
11 icebreaker ship.